



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,260	12/31/2003	Jensen Lee	SUND 497	6982

23995 7590 12/18/2006

RABIN & Berdo, PC  
1101 14TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20005

EXAMINER
----------

PEREZ, ANGELICA

ART UNIT	PAPER NUMBER
----------	--------------

2618

DATE MAILED: 12/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/748,260	Applicant(s) LEE ET AL.	
	Examiner Perez M. Angelica	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is FINAL.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/02/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (Kim et al; EP 0977414 A2).

Regarding claim 1, Kim teaches of a portable electronic communication device comprising (figure 1): a base having a front surface (figure 2, where the front surface comprises the keyboard and display); a cover (figure 1, item 102), which is mounted to the base in such a way that the cover can be folded upon (figure 1), unfolded from (figure 2) and turned around the base (figure 2, item 102, where it can turn around to contact the base and paragraph 15), where the cover has a compartment (where the compartment holds items seen in figure 3), a front surface (figure 1, where the front surface can be the surface facing the outside), and a rear surface (figure 2, where the rear surface can be the surface facing the inside), where the front surface and the rear surface of the cover have a plurality of first apertures and a plurality of second apertures respectively (figures 1 and 2, items 118 and 124, respectively), and the compartment communicates with an outside of the cover through the first apertures and the second apertures (paragraph 17); and a receiver deposited in the compartment between the first apertures and the second apertures (paragraphs 17 and 18), where sound

generated by the receiver can be transmitted through the first or second apertures when the cover is folded upon the base in such a way that the front surface or the rear surface of the cover rests against the front surface of the base (paragraph 19).

Regarding claim 2, Kim teaches all the limitations according to claim 1. Kim further teaches where the first apertures have a total cross-sectional area, which is substantially the same as that of the second apertures (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

Regarding claim 6, Kim teaches all the limitations according to claim 1. Kim further teaches of an operating button for inputting command (paragraph 21 and figure 1, item 114).

Regarding claim 7, Kim teaches all the limitations according to claim 1. Kim further teaches of a microphone deposited inside the cover for receiving voice of a user of the device (paragraph 2).

Regarding claim 8, Kim teaches all the limitations according to claim 1. Kim further teaches of a speaker deposited inside the cover (figure 2, item 124), the speaker generating sound while the cover is unfolded from the base (paragraph 19).

Regarding claim 9, Kim teaches all the limitations according to claim 1. Kim further teaches of a keyboard deposited on the front surface of the base for inputting data or command (figure 2, item 116).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Hwang (Hwang, Seon-Woong; US Patent No.: 7103393 B2).

Regarding claim 3, Kim teaches all the limitations according to claim 1. Kim further teaches where the receiver divides the compartment into a first sub-compartment and a sub-second compartment, the first sub-compartment and the second sub-compartment communicate with the outside of the cover through the first apertures and the second apertures respectively (paragraphs 21 and 29; figure 3).

Kim does not specifically teach where the first sub-compartment has a volume which is substantially equal to that of the second sub-compartment.

In relate art concerning a sound output system and method of a mobile communication terminal, Hwang teaches where the first sub-compartment has a volume which is substantially equal to that of the second sub-compartment (column 4, lines 19-22 and 40-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim's foldable device with Hwang's symmetrical

speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

5. Claims 4-5, 10-11, 13-14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Tyneski (Tyneski et al; US Patent No.: 5584054 A).

Regarding claim 4, Kim teaches all the limitations according to claim

Kim does not specifically teach where a display panel is deposited on the front surface of the cover for displaying data of the device.

In relate art concerning a communication device having a movable front cover for exposing a touch sensitive display, Tyneski teaches where a display panel is deposited on the front surface of the cover for displaying data of the device (figure 1; where he upper portion of the front cover comprises a display).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim's foldable device with Tyneski's display located on the front face of the cover in order to integrate several devices in a more compacted body, as taught by Tyneski.

Regarding claim 5, Kim teaches all the limitations according to claim 1.

Kim does not specifically teach where the display panel is a touch display panel adapted to be activated by a stylus.

Tyneski teaches where the display panel is a touch display panel adapted to be activated by a stylus (figure 2, item 112 and claims 1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim's foldable device with Tyneski's stylus activated display in order to "send handwritten data to the display when the flap is closed, as taught by Tyneski.

Regarding claim 10, Kim teaches of a portable electronic communication device comprising (figure 1): a (figure 2); a cover mounted to the base in such a way that the cover can be folded upon (figure 1, item 102), unfolded from (figure 2) and turned around the base (figure 2, item 102, where it can turn around to contact the base and paragraph 15), the cover having a front surface (figure 1, where the front surface can be the surface facing the outside) defining at least a first aperture and a rear surface defining a second aperture (figures 1 and 2, items 118 and 124, respectively), and a receiver deposited inside the cover where sound generated by the receiver can be transmitted through at least a first apertures or at least a second aperture when the cover is folded upon the base (paragraphs 17-19).

Kim does not specifically teach a display mounted in cover.

Tyneski teaches of a display mounted in cover (figure 1; where the upper portion of the front cover comprises a display).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim's foldable device with Tyneski's display located in the cover in order to integrate several devices in a more compacted body, as taught by Tyneski.

Regarding claim 11, Kim and Tyneski teach all the limitations according to claim 10. Kim further teaches of a keyboard deposited on the front surface of the base for inputting data or command (figure 2, item 116).

Regarding claim 13, Kim and Tyneski teach all the limitations according to claim 10. Kim further teaches of a speaker deposited inside the cover (figure 2, item 124), where the sound generated by the speaker is transmitted to an outside of the cover when the cover is unfolded from the base (paragraph 19).

Regarding claim 14, Kim and Tyneski teach all the limitations according to claim 10. Kim further teaches of a microphone for receiving voice of a user of the device (paragraph 2).

Regarding claim 19, Kim and Tyneski teach all the limitations according to claim 10. Kim further teaches where the base is equipped with a (figure 2, item 116), and the cover is further equipped with a microphone for receiving voice of a user of the device (paragraph 2).

Regarding claim 20, Kim and Tyneski teach all the limitations according to claim 19. Kim further teaches where of a speaker which generates sound when the cover is unfolded from the base.

Regarding claim 21, Kim and Tyneski teach all the limitations according to claim 20.

Tyneski teaches where the display panel is a touch display panel adapted to be activated by a stylus (figure 2, item 112 and claims 1-2).



Art Unit: 2618

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim's foldable device with Tyneski's stylus activated display in order to "send handwritten data to the display when the flap is closed, as taught by Tyneski.

6. Claims 12 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Tyneski and further in view of Hwang.

Regarding claim 12, Kim and Tyneski teach all the limitations according to claim 11. Kim further teaches where the first apertures have a total cross-sectional area, which is substantially the same as that of the second apertures (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

Kim and Tyneski do not specifically teach where the first sub-compartment has a volume which is substantially equal to that of the second sub-compartment.

In relate art concerning a sound output system and method of a mobile communication terminal, Hwang teaches where the first sub-compartment has a volume which is substantially equal to that of the second sub-compartment (column 4, lines 19-22 and 40-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's foldable device with Hwang's symmetrical speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

Regarding claim 15, Kim and Tyneski teach all the limitations according to claim 10.

Art Unit: 2618

Kim and Tyneski do not specifically teach where the at least a first aperture has a cross-sectional area which is substantially equal to that of the at least a second aperture.

Hwang teaches where the at least a first aperture has a cross-sectional area which is substantially equal to that of the at least a second aperture (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's foldable device with Hwang's symmetrical speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

Regarding claim 16, Kim and Tyneski teach all the limitations according to claim 10.

Kim and Tyneski do not specifically teach where the receiver is deposited inside a compartment in the cover, and divides the compartment into two sub-compartments having substantially the same volume.

Hwang teaches where the receiver is deposited inside a compartment in the cover, and divides the compartment into two sub-compartments having substantially the same volume (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's foldable device with Hwang's

symmetrical speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

Regarding claim 17, Kim and Tyneski teach all the limitations according to claim 13.

Kim and Tyneski do not specifically teach where the at least a first aperture has a cross-sectional area which is substantially the same to that of the at least a second aperture.

Hwang teaches where the at least a first aperture has a cross-sectional area which is substantially the same to that of the at least a second aperture (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's foldable device with Hwang's symmetrical speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

Regarding claim 18, Kim, Tyneski and Hwang teach all the limitations according to claim 17.

Kim and Tyneski do not specifically teach where the receiver is deposited inside a compartment in the cover and divides the compartment into two sub-compartments communicating with the at least a first and second aperture, respectively, the two sub-compartments having substantially the same volume.

Hwang teaches where the receiver is deposited inside a compartment in the cover and divides the compartment into two sub-compartments communicating with the

Art Unit: 2618

at least a first and second aperture, respectively, the two sub-compartments having substantially the same volume (figure 3, where it can be seen that the cross-sectional area of both apertures is the same).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's

s foldable device with Hwang's symmetrical speaker arrangement in order to obtain the same volume sound; thus, getting higher quality of sound, as taught by Hwang.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Tyneski and further in view of Hageltorn (Hageltorn et al.; US Patent No.: 6006117 A).

Regarding claim 22, Kim and Tyneski teach all the limitations according to claim 21.

Kim and Tyneski do not specifically teach where the microphone receives the voice of the user through aperture defined in an lateral surface of the cover, said lateral surface being between the front and rear surfaces of the cover.

In related art concerning a radio telephone with separate antenna for stand-by mode, Hageltorn teaches teach where the microphone receives the voice of the user through aperture defined in an lateral surface of the cover, said lateral surface being between the front and rear surfaces of the cover (figure 6a, item 74; where the microphone is located between the front and rear faces of the front cover).

Art Unit: 2618

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kim and Tyneski's foldable device with Hageltorn's positioning of the microphone in order to so that the user can talk on the microphone when making/receiving a call.

***Conclusion***


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 6:00 a.m. - 1:30 p.m., Monday - Friday.

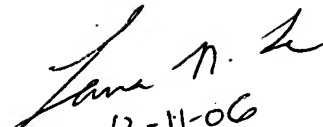
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Art Unit: 2618

  
Angelica Perez  
Examiner

  
12-11-06  
LANA LE  
PRIMARY EXAMINER

Art Unit 2618

November 28, 2006